

## TECHNICAL REPORT TITLE PAGE

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TR-494

**2. REPORT DATE**

September 2003

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**3. TITLE AND SUBTITLE**

Statistical Analysis of Highway Needs Condition  
Data: Manual vs. Automated

**4. TYPE OF REPORT & PERIOD COVERED**

Final Report, March 2003 to September 2003

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**5. AUTHOR(S)**

Omar Smadi  
Pavement Management Specialist

**6. PERFORMING ORGANIZATION ADDRESS**

Center for Transportation Research and Education  
Iowa State University  
2901 South Loop Drive, Suite 3100  
Ames, Iowa 50010-8634

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**8. ABSTRACT**

This project examines similarities and differences between the automated condition data collected on and off county paved roads and the manual condition data collected by Iowa DOT staff in 2000 and 2001. Also, the researchers will provide staff support to the advisory committee in exploring other options to the highway need process.

The results show that the automated condition data can be used in a converted highway needs process with no major differences between the two methods. Even though the foundation rating difference was significant, the foundation rating weighting factor in HWYNEEDS is minimal and should not have a major impact.

In terms of RUTF formula based distribution, the results clearly show the superiority of the condition-based analysis compared to the non-condition based. That correlation can be further enhanced by adding more distress variables to the analysis.

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**9. KEY WORDS**

Highway Needs,  
Condition data,  
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